

In the claims:

1. An apparatus, comprising:
a Switch, the Switch including:
a port configured to receive a write command defining an initiating Host and a target;
a trapping mechanism configured to trap the write frame if the write command designates a predetermined Host_ID and a predetermined target_ID; and
a processor configured to process trapped write commands by modifying either the OX_ID or RX_ID of the write command header.
2. The apparatus of claim 1, wherein the Switch is an initiating Switch coupled to the Host in a first SAN.
3. The apparatus of claim 2, wherein the processor of the initiating Switch is further configured to modify the write command before forwarding the write command to the target.
4. The apparatus of claim 3, wherein the initiating Switch is further configured to modify the write command by modifying the OX_ID value for the write command before forwarding the write command to the target.
5. The apparatus of claim 4, wherein the initiating Switch uses the initialized RX_ID value as a handle for accessing information pertaining to the write command session in a sessions ID table.
6. The apparatus of claim 2, wherein the processor of the initiating Switch is further configured to issue a Transfer Ready command to the Host.

7. The apparatus of claim 5, wherein the initiating Switch is further configured to initialize and use the initialized RX_ID value for all communication related to the write frame between the initiating Switch and the Host.

8. The apparatus of claim 5, wherein the initiating Switch is further configured to modify the OX_ID value with communications between the initiating Switch and the target.

9. The apparatus of claim 2, wherein the initiating Switch is further configured to transfer additional data frames to the target when the initiating Switch receives a Transfer Ready command associated with the write frame from the target.

10. The apparatus of claim 1, wherein the Switch is a target Switch coupled to the target.

11. The apparatus of claim 10, wherein the target Switch forwards the write command to the target.

12. The apparatus of claim 11, wherein the target Switch forwards data frames associated with the write command to the target after receiving a Transfer Ready command from the target.

13. The apparatus of claim 12, wherein the target Switch is further configured to buffer the data frames prior to receipt of the Transfer Ready command.

14. The apparatus of claim 12, wherein the target Switch is further configured to maintain a sessions ID table and to use the OX_ID of the write command as an index to the session corresponding to the write command.

15. The apparatus of claim 10, wherein the target Switch is further configured to modify the RX_ID value for all communication related to the write frame between the target Switch and the Host.

16. The apparatus of claim 5, wherein the target Switch is further configured to modify the OX_ID value with communications between the target Switch and the target.

17. The apparatus of claim 1 wherein the Switch is further configured to use the RX_ID value of trapped write commands to specify the amount of buffer space needed for the write command and use the write command frame to request the needed buffer space.

18. The apparatus of claim 17, wherein the Switch is further configured to use the RX_ID value of trapped write commands to specify the amount of buffer space larger than needed for the write command and use the additional buffer space for subsequent write commands so that the Switch need not wait for a Transfer Ready command to transfer data related to the subsequent write command.

19. The apparatus of claim 1, wherein the Switch is further configured to, in the event the Switch does not have sufficient buffer space for the write command, to either:

- (i) generate a busy status signal to the initiating Host;
- (ii) placing the write command on a pending wait list; or
- (iii) forwarding the write command to the target.

20. The apparatus of claim 1, further comprising:

- a first SAN including the Switch;
- a second SAN including a second Switch; and
- an inter-SAN network connecting the first SAN and the second SAN.

21. A method comprising:

trap write commands specifying a predesignated Host ID corresponding to a Host and target ID corresponding to a target and including an OX_ID value and an uninitialized RX_ID value at a Switch;

configuring the Switch to forward the write command to the target;

configuring the Switch to initialize the RX_ID of the write command; and

configuring the Switch to generate a Transfer Ready command including the initialized RX_ID value to the Host as a proxy for the target.

22. The method of claim 21, further comprising configuring the Switch to forward data frames associated with the write command received in response to the Transfer Ready command to the target.

23. The method of claim 22, further comprising:

receiving the write command forwarded to the target by the Switch at a second Switch;

configuring the second Switch to forward the write command to the target; and
either:

buffering the data frames forwarded to the target by the Switch until a Transfer Ready command is received from the target; or

forwarding the data frames from the Switch to the target if the Transfer Ready command has already been received from the Host.